

**REMARKS**

Claims 6-27 are pending in this application. By this Amendment, claims 6-7, 9, 12, 16, 19-20 and 22 are amended for clarity, claims 1-5 are canceled without prejudice or disclaimer and new claims 25-27 are added.

The Office Action objects to claims 4-24 because of informalities. It is respectfully submitted that the above amendments obviate the grounds for objection of the claims. That is, the proposed amendments for each of claims 7, 9, 12, 16, 19, 20 and 22 have been incorporated into the above claims.

However, applicants have not incorporated the Office Action's suggestions with regard to claims 6, 10 and 23. That is, the Office Action proposes a "definition" of a Binary Expression Diagram (BED) based on applicants' specification at pages 5-6. However, this description is a description of the meaning (i.e., semantics) of a particular BED in a particular context. A BED is a more general concept. As is well known to one skilled in the art, and as discussed in paragraph [30] for example, a BED is a graphical representation of a Boolean expression (Boolean formula). Applicants respectfully submit that each of claims 6, 10 and 23 are clear and definite regarding a Binary Expression Diagram. That is, one skilled in the art would clearly understand the meaning of a Binary Expression Diagram (BED). Thus, claims 6, 10 and 23 have not been further amended as suggested since BED is well known to one skilled in the art. However, in order to further prosecution, new dependent claims 25-27 have been added to further relate to BEDs. Withdrawal of the objection is respectfully requested.

Applicants gratefully acknowledge the Office Action's indication that claims 9-24 are

Reply to Office Action dated October 6, 2005

allowable if rewritten to overcome the minor informalities. However, as set forth below, all claims are believed to be patentable.

The Office Action rejects claims 6-8 under 35 U.S.C. §102(e) over the article to Bischoff et al. (hereafter Bischoff). The rejection is respectfully traversed.

Independent claim 6 recites computing a Timed Binary Expression Diagram (TBED) for each circuit node as a Binary Expression Diagram (BED), and applying a satisfiability (SAT) solver or a BDD tool to establish equivalence for each TBED corresponding to each circuit output node.

Bischoff does not teach or suggest all these features of independent claim 6. That is, Bischoff does not teach computing a Timed Binary Expression Diagram (TBED) for each circuit node. Rather, Bischoff merely discloses the use of Binary Decision Diagrams (BDDs) such as Ternary Binary Decision Diagrams (TBDDs). Bischoff does not disclose a TBED. Accordingly, there is no suggestion for computing a Timed Binary Expression Diagram (TBED) for each circuit node as a Binary Expression Diagram (BED).

Further, Bischoff does not teach or suggest applying a satisfiability (SAT) solver or a BDD tool to establish equivalence for each TBED corresponding to each circuit output node. As stated above, Bischoff does not suggest a TBED. Therefore, Bischoff does not suggest applying a SAT solver or a BDD tool to establish equivalence for each TBED.

For at least the reasons set forth above, independent claim 6 defines patentable subject matter. Claims 7-8 and 26 depend from claim 6 and therefore define patentable subject matter at least for this reason.

Serial No. 10/608,423

Docket No. INTEL-0022

Reply to Office Action dated October 6, 2005

### CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 6-27 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, David C. Oren, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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